UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,747	02/19/2004	Toshiyuki Miyabayashi	U 015043-1	1662

140 7590 04/05/2007

LADAS & PARRY
26 WEST 61ST STREET
NEW YORK, NY 10023

EXAMINER	
SHOSHO, CALLIE E	
ART UNIT	PAPER NUMBER
1714	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/782,747	MIYABAYASHI, TOSHIYUKI	
	Examiner	Art Unit	
	Callie E. Shosho	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/5/07 & 11/21/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *68-110* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *68-110* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. All outstanding rejections are overcome in light of applicant's amendments filed 1/5/07 and 11/21/06.

In light of the new grounds of rejection set forth below, the following action is non-final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 87, 94, 102, and 110 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Newly added claims 87, 94, 102, and 110 each recite "microencapsulated pigment comprising particles having average particle size of 150 nm or less as measured by laser light scattering process". It is the examiner's position that this phrase fails to satisfy the written description requirement under the cited statute since there does not appear to be a written description requirement of the cited phrase in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163.

As support for the above amendment, applicants to paragraph bridging pages 33-34 of the present specification. However, there is no disclosure that the average particle size recited in this

portion of the specification is for the microencapsulated pigment. This portion of the present specification appears to refer to the average particle size of the pigment itself not the microencapsulated pigment. Evidence to support this position is found on page 53, lines 4-9 of the present specification which discloses the average particle size of the microencapsulated pigment as 400 nm or less, preferably 300 nm or less, particularly preferably 50-200 nm.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 68-82, 85-89, 92-97, 100-105, and 108-110 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/96483 taken in view of the evidence given in either Pollard (U.S. 4,173,492) or Foye et al. (U.S. 4,910,236).

WO 01/96483[1] discloses process for preparing microencapsulated pigment comprising adding polymerizable surfactant, monomer, polymerization initiator, and aqueous medium to pigment and emulsion polymerizing to encapsulate the pigment with polymer. The monomers have groups such as vinyl, allyl, or (meth)acryloyl group and include hydrophilic monomers

[1] It is noted that when utilizing WO 01/96483 in the above paragraph, the disclosures of the reference are based on Yatake et al. (U.S. 2003/0106462) which is an English language equivalent of the reference. Therefore, the column and line numbers cited with respect to WO 01/96483 are found in Yatake et al.

having carboxyl, hydroxyl, or carbonyl group and hydrophobic monomer having aromatic or aliphatic hydrocarbon group, i.e. styrene or alkyl (meth)acrylate. The polymerizable surfactant contains polymerizable group, i.e. vinyl, allyl, (meth)acryloyl, hydrophilic group, i.e. carboxyl, carbonyl, hydroxyl, and hydrophobic group, i.e. aromatic group. The pigment includes carbon black as well as organic pigment. It is disclosed that the pigment includes wet pigment, i.e. pigment wet cake. The microencapsulated pigment possesses average particle size of at most 200 nm as measured by laser light scattering. There is further disclosed aqueous dispersion of the microencapsulated pigment as well as ink comprising the aqueous dispersion. It is also disclosed that the aqueous dispersion is purified to remove unreacted monomer. The ink also contains water, 0.05-30% solvent such as glycol ether and/or 1,2-alkylene glycol, 1,2,6-hexanetriol, acetylene glycol surfactant, and saccharide (paragraphs 1, 16,19, 33, 42-43, 53-56, 72-77, 93-95, 103, 111, 127-128, 139, 142, 149, 152-154, 160, 162, 165-167, 175, 181, 189-190, 199, 205, 206, 208, 213-216, 274, and 279-280). Given that WO 01/96483 discloses that the microencapsulated pigment is produced using identical process as presently claimed including emulsion polymerization as well as using polymerizable surfactant and monomers identical to that presently claimed, it is clear that the microencapsulated pigment would inherently possess aspect ratio and Zingg index as presently claimed.

Further, although there is no explicit disclosure regarding the water content of the wet pigment, it is well known, as evidenced by Pollard (col.4, lines 29-33), that pigment wet cake or presscake inherently possesses water content of approximately 50%, or as evidenced by Foye et al. (col.1, lies 33-35), that conventional pigment wet cake or presscake inherently possesses greater than 50% water.

In light of the above, it is clear that WO 01/96483 anticipates the present claims.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 83-84, 90-91, 98-99, and 106-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/96483 in view of Miyabayashi et al. (U.S. 2002/0107303).

The disclosure with respect to WO 01/96483 in paragraph 5 above is incorporated here by reference.

The difference between WO 01/96483 and the present claimed invention is the requirement in the claims of solid wetting agent.

Miyabayashi et al., which is drawn to ink composition, disclose the use of 3-20% solid wetting agent such as 1,2,6-hexanetriol or trimethylolpropane in order to produce ink with good storage stability that does not clog printer nozzles (paragraphs 82, 102-103, and claim 23).

In light of the motivation for using solid wetting agent disclosed by Miyabayashi et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such solid wetting agent in the ink of WO 01/96483 in order to produce ink with good storage stability that does not clog printer nozzles, and thereby arrive at the claimed invention.

8. Claims 68-80, 95-97, 101-105, and 109-110 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuribayashi et al. (U.S. 2004/0009294) in view of Mitchell et al. (U.S.

5,026,427), Takahashi et al. (U.S. 5,948,825), and either Pollard (U.S. 4,173,492) or Foye et al. (U.S. 4,910,236).

Kuribayashi et al. disclose process for preparing polymer containing pigment, i.e. microencapsulated pigment, comprising adding polymerizable surfactant, monomer, polymerization initiator, and aqueous medium to pigment and emulsion polymerizing to encapsulate the pigment with polymer. The monomers include hydrophilic monomers having carboxyl group and hydrophobic monomer having aromatic or aliphatic hydrocarbon group, i.e. styrene or alkyl (meth)acrylate. The polymerizable surfactant contains polymerizable group, hydrophilic group, i.e. carboxyl, carbonyl, hydroxyl, and hydrophobic group. The polymerizable surfactant utilized in Kuribayashi et al. are known under the tradenames Adeka Reasoap and Aqualon which are identical to the polymerizable surfactant utilized in the present invention. The pigment includes carbon black as well as organic pigment. The microencapsulated pigment has average particle size no greater than 150 nm as measured using DLS-7000 which is well known, as disclosed by Takahashi et al. (col.5, lines 26-31), to measure average particle size utilizing laser light scattering. There is further disclosed aqueous dispersion of the microencapsulated pigment as well as ink comprising the aqueous dispersion. The ink also contains water and 2-60% solvent such as glycol ether (paragraphs 2, 9, 15, 56-57, 63, 65, 68-70, 74-76, and 108).

The difference between Kuribayashi et al. and the present claimed invention is the requirement in the claims of wet pigment.

Mitchell et al., which is drawn to ink jet ink, disclose the use of pigment in water wet presscake form given that the pigment is not agglomerated to the extent that it is in dry form and

thus, pigments in water-wet presscake form do not require as much deflocculation in the process of preparing the ink (col.4, lines 43-50).

Although there is no explicit disclosure in Mitchell et al. of the water content of the pigment presscake, it is well known, as disclosed by Pollard (col.4, lines 29-33), that pigment presscake intrinsically possesses water content of approximately 50%, or as evidenced by Foye et al. (col.1, lines 33-35), that conventional pigment presscake intrinsically possesses greater than 50% water.

Given that Kuribayashi et al. in combination with Mitchell et al. disclose that the microencapsulated pigment is produced using identical process as presently claimed including emulsion polymerization as well as using polymerizable surfactant and monomers identical to that presently claimed, it is clear that the microencapsulated pigment would intrinsically possess aspect ratio and Zingg index as presently claimed.

In light of the motivation for using wet pigment disclosed by Mitchell et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use wet pigment as the pigment in Kuribayashi et al. in order that process for producing microencapsulated pigment would not require first deflocculating the pigment resulting in easier and less costly process, and thereby arrive at the claimed invention.

9. Claims 98-100 and 106-108 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuribayashi et al. in view of Mitchell et al., Takahashi et al., and either Pollard or Foye et al. as applied to claims 68-80, 95-97, 101-105, and 109-110 above, and further in view of Miyabayashi et al. (U.S. 2002/0107303).

The difference between Kuribayashi et al. in view of Mitchell et al., Takahashi et al., and either Pollard or Foye et al. and the present claimed invention is the requirement in the claims of solid wetting agent.

Miyabayashi et al., which is drawn to ink composition, disclose the use of 3-20% solid wetting agent including mixtures of two or more solid wetting agents such as 1,2,6-hexanetriol, trimethylolpropane, and saccharide in order to produce ink with good storage stability that does not clog printer nozzles (paragraphs 82 and 102-103 and claim 23).

In light of the motivation for using solid wetting agent disclosed by Miyabayashi et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use solid wetting agent including trimethylolpropane, 1,2,6-hexanetriol, and saccharide in the ink of Kuribayashi et al. in order to produce ink with good storage stability that does not clog printer nozzles, and thereby arrive at the claimed invention.

10. Claims 81-82, 86-89, and 93-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuribayashi et al. (U.S. 2004/0009294) in view of Mitchell et al. (U.S. 5,026,427), Yatake et al. (U.S. 2003/0106462), JP 10-046073, Takahashi et al. (U.S. 5,948,825), and either Pollard (U.S. 4,173,492) or Foye et al. (U.S. 4,910,236).

Kuribayashi et al. disclose ink comprising aqueous dispersion of microencapsulated pigment, water, and 2-60% solvent such as glycol ether. There is also disclosed process for preparing polymer containing pigment, i.e. microencapsulated pigment, comprising adding polymerizable surfactant, monomer, polymerization initiator, and aqueous medium to pigment and emulsion polymerizing to encapsulate the pigment with polymer. The polymerizable

surfactant contains polymerizable group, hydrophilic group, and hydrophobic group. The pigment includes carbon black as well as organic pigment such as Pigment Red 122. The microencapsulated pigment has average particle size no greater than 150 nm as measured using DLS-7000 which is well known, as disclosed by Takahashi et al. (col.5, lines 26-31), to measure average particle size utilizing laser light scattering (paragraphs 2, 9, 15, 56-57, 63, 65, 68-70, 74-76, and 108).

The difference between Kuribayashi et al. and the present claimed invention is the requirement in the claims of (a) wet pigment and (b) subjecting the aqueous dispersion to purification so that the concentration of unreacted polymerizable surfactant and monomer is 50,000 ppm or less.

With respect to difference (a), Mitchell et al., which is drawn to ink jet ink, disclose the use of pigment in water wet presscake form given that the pigment is not agglomerated to the extent that it is in dry form and thus, pigments in water-wet presscake form do not require as much deflocculation in the process of preparing the ink (col.4, lines 43-50).

Although there is no explicit disclosure in Mitchell et al. of the water content of the pigment presscake, it is well known, as disclosed by Pollard (col.4, lines 29-33), that pigment presscake intrinsically possesses water content of approximately 50%, or as evidenced by Foye et al. (col.1, lines 33-35), that conventional pigment presscake intrinsically possesses greater than 50% water.

With respect to difference (b), Yatake et al. discloses purifying ink in order to remove unreacted monomer.

JP 10-046073 discloses using ink having less than 1000 ppm unreacted monomer in order to produce ink with no odor that has good print quality (paragraphs 39-40).

In light of the motivation for using wet pigment disclosed by Mitchell et al. as described above and for purifying ink disclosed by Yatake et al. and JP 10-046073 as described above, it therefore would have been obvious to one of ordinary skill in the art to use wet pigment as the pigment in Kuribayashi et al. in order that process for producing microencapsulated pigment would not require first deflocculating the pigment resulting in easier and less costly process and to purify the ink of Kuribayashi et al. in order that the aqueous dispersion have 1000 ppm or less unreacted monomer in order to produce ink with no odor that has good print quality, and thereby arrive at the claimed invention.

11. Claims 83-85 and 90-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuribayashi et al. in view of Mitchell et al., Yatake et al., JP 10-046073, Takahashi et al., and either Pollard or Foye et al. as applied to claims 81-82, 86-89, and 93-94 above, and further in view of Miyabayashi et al. (U.S. 2002/0107303).

The difference between Kuribayashi et al. in view of Mitchell et al., Yatake et al., JP 10-046073, Takahashi et al., and either Pollard or Foye et al. and the present claimed invention is the requirement in the claims of (a) solid wetting agent and (b) acetylene glycol.

With respect to difference (a), Miyabayashi et al., which is drawn to ink composition, disclose the use of 3-20% solid wetting agent including mixtures of two or more solid wetting agents such as 1,2,6-hexanetriol, trimethylolpropane, and saccharide in order to produce ink with

good storage stability that does not clog printer nozzles (paragraphs 82 and 102-103 and claim 23).

In light of the motivation for using solid wetting agent disclosed by Miyabayashi et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use solid wetting agent including trimethylolpropane, 1,2,6-hexanetriol, and saccharide in the ink of Kuribayashi et al. in order to produce ink with good storage stability that does not clog printer nozzles, and thereby arrive at the claimed invention.

With respect to difference (b), Miyabayashi et al. disclose the use of acetylene glycol as penetrating agent in order to enhance the ability of the ink to penetrate recording media so that printed images have no feathering or bleeding (paragraphs 92-96).

In light of the motivation for using acetylene glycol disclosed by Miyabayashi et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use acetylene glycol in the ink of Kuribayashi et al. in order to produce ink that does not bleed or feather, and thereby arrive at the claimed invention.

12. Claims 95, 97-101, 103, and 105-109 rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (U.S. 6,866,707) in view of Mitchell et al. (U.S. 5,026,427) and either Pollard (U.S. 4,173,492) or Foye et al. (U.S. 4,910,236).

Kato disclose microencapsulated pigment comprising pigment completely enveloped in polymer wherein the polymer is obtained from monomers having groups such as vinyl, allyl, or (meth)acryloyl group that include hydrophilic monomers having carboxyl, hydroxyl, or carbonyl group and hydrophobic monomer having aromatic or aliphatic hydrocarbon group, i.e. styrene or

alkyl (meth)acrylate. The polymerizable surfactant contains polymerizable group, i.e. vinyl, allyl, (meth)acryloyl, hydrophilic group, i.e. carboxyl, hydroxyl, and hydrophobic group, i.e. aromatic group. The pigment includes carbon black as well as organic pigment. There is further disclosed aqueous dispersion of the microencapsulated pigment as well as ink comprising the aqueous dispersion. The ink also contains water, 0.05-30% solvent such as glycol ether, and saccharide. From the examples, it is seen that the ink also comprises 6% trimethylolpropane, i.e. solid wetting agent (col.1, lines 6-11, col.4, lines 46-48, col.5, line 36-col.6, line 25, col.7, lines 11-20, col.7, line 34-col.8, line 44, col.9, line 45-col.10, line 14, col.11, lines 14-40, col.12, lines 41-49, col.16, lines 22 and 66-67, and col.19, lines 9-10).

The difference between Kato and the present claimed invention is the requirement in the claims of (a) wet pigment and (b) process for preparing microencapsulated pigment.

With respect to difference (a), Mitchell et al., which is drawn to ink jet ink, disclose the use of pigment in water wet presscake form given that the pigment is not agglomerated to the extent that it is in dry form and thus, pigments in water-wet presscake form do not require as much deflocculation in the process of preparing the ink (col.4, lines 43-50).

Although there is no explicit disclosure in Mitchell et al. of the water content of the pigment presscake, it is well known, as disclosed by Pollard (col.4, lines 29-33), that pigment presscake intrinsically possesses water content of approximately 50%, or as evidenced by Foye et al. (col.1, lines 33-35), that conventional pigment wet cake or presscake intrinsically possesses greater than 50% water.

Given that Kato in combination with Mitchell et al. disclose that the microencapsulated pigment is produced using identical process as presently claimed including emulsion

polymerization as well as using polymerizable surfactant and monomers identical to that presently claimed, it is clear that the microencapsulated pigment would intrinsically possess aspect ratio and Zingg index as presently claimed.

In light of the motivation for using wet pigment disclosed by Mitchell et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use wet pigment as the pigment in Kato in order that process for producing microencapsulated pigment would not require first deflocculating the pigment resulting in easier and less costly process, and thereby arrive at the claimed invention.

With respect to difference (b), it is noted that there is no disclosure in Kato of process for preparing microencapsulated pigment as required in present claims 95, 97-100, 103, and 105-108. However, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself". See MPEP 2113.

Thus, although Kato do not disclose process for preparing microencapsulated pigment as presently claimed, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process," *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for preparing microencapsulated pigment and given that Kato meets the requirements of the claimed product, i.e. microencapsulated pigment, it is clear that Kato meets the requirements of present claims 95, 97-100, 103, and 105-108.

13. Claims 102 and 110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Mitchell et al. and either Pollard or Foye et al. as applied to claims 95, 97-101, 103, and 105-109 above, and further in view of Kuribayashi et al. (U.S. 2004/0009294).

The difference between Kato in view of Mitchell et al. and either Pollard or Foye et al. and the present claimed invention is the requirement in the claims of average particle size of the microencapsulated pigment.

Kuribayashi et al., which is drawn to ink jet ink comprising microencapsulated pigment, disclose the use of microencapsulated pigment having average particle size no greater than 150 nm as measured using DLS-7000 which is well known, as disclosed by Takahashi et al. (col.5, lines 26-31), to measure average particle size utilizing laser light scattering, in order that the microencapsulated pigment is suitable for use in ink jet ink (paragraphs 26 and 110).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to utilize microencapsulated pigment with average particle size no greater than 150 nm in Kato so that the microencapsulated pigment is suitable for use in ink jet ink, i.e. does not clog printer nozzles, and thereby arrive at the claimed invention.

Response to Arguments

14. Applicant's arguments filed 1/5/07 and 11/21/06 have been fully considered but they are not persuasive.

Specifically, applicant argues that none of the cited references, namely, WO 01/96483, Kuribayashi et al., and Kato, disclose wet pigment.

However, with respect to WO 01/96483, attention is drawn to paragraph 190 that discloses the use of wet pigment.

With respect to Kuribayashi et al. and Kato, it is agreed that there is no disclosure in either reference of wet pigment which is why each reference is used in combination with Mitchell et al., which is drawn to ink jet ink, and discloses the use of pigment in water wet presscake form given that the pigment is not agglomerated to the extent that it is in dry form and thus, pigments in water-wet presscake form do not require as much deflocculation in the process of preparing the ink.

Applicant argues that none of the cited references disclose average particle size of microencapsulated pigment as presently claimed.

However, attention is drawn to paragraphs 189 and 274 of WO 01/96483 that disclose that the microencapsulated pigment has average particle size of at most 200 nm measured using laser light scattering and to paragraphs 26 and 110 of Kuribayashi et al. that disclose that the microencapsulated pigment has average particle size no greater than 150 nm measured using DLS-7000 which is well known, as disclosed by Takahashi et al. (col.5, lines 26-31), to measure average particle size utilizing laser light scattering. While it is agreed that there is no disclosure

in Kato of the average particle size of the microencapsulated pigment, this is why Kato is now used in combination with Kuribayashi et al. that teaches such average particle size.

Applicant also argues that none of the cited references disclose the water content of the wet pigment.

It is agreed that there is no disclosure in WO 01/96483, Kuribayashi et al., and Kato of the water content of the wet pigment which is why each reference is now used in combination with Pollard (U.S. 4,173,492) or Foye et al. (U.S. 4,910,236) that each disclose typical water contents for wet pigments.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
4/1/07